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EXAMINER	
ZHAO, DAQUAN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/024,716	CHO, CHANG-HYUNG	
	Examiner	Art Unit	
	DAQUAN ZHAO	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,7,11,14-17,19-22,24,25,35-43 and 45-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6-7, 11, 14-17, 19-22, 24-25, 35-43, 45-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/13/2010 have been fully considered but they are not persuasive.

2. Applicant argue, on page 10 of the remark, Kawase discusses that “genre information relates channels to genres.”; and “Specifically, the channel input in Kawase only determines genre information for the entire channel, rather than determining the category of the A/V signal depending on the feature information. A digital broadcast reception unit receives dozens, if not hundreds, of channels, and each channel then has dozens of features. But neither Kawase nor Corey discuss determininga category item for the A/V signal using feature information."

3. Paragraph 125 and figures 9 of Kawase teaches search result of genre search. Figure 9 shows that the desired program can be found in the specific channel in a specific time. Therefore, it is not true that " the channel input in Kawase only determines genre information for the entire channel"

4. Applicant argues, on pages 10-11, “By contrast, claim 1 recites the technical feature of determining a category item for the A/V signal using feature information of the received A/V signal regardless of user's input information"." However, claim 1 does not require “determining a category item for the A/V signal using feature information of the received A/V signal **regardless of user's input information.**"

5. Applicant also argues, on page 11 of the remark, “It is also respectfully submitted that Kawase does not relate to a method of recording an A/V signal". However, the

teaching of Kawase is related to "searching video", which concerns the problem applicant's trying to solve.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-4, 11, 16-17, 19-22, 36-38, 40, 42-43, 45, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al (US 5,703,655) and further in view of Hiroahi et al (EP 1063797 A2).

For claim 1, Corey et al teach a method of recording an audio/video (A/V) signal, comprising: determining a category item for the A/V signal (e.g. column 10, lines 5-17, video program are categorized into categories such as movies, sports, entertainment…etc under “retrieval by title”); storing search information about the A/V signal, the search information including the category item (e.g. column 10, lines 5-17, the title indexing area for “retrieval by title" is stored in the closed caption storage 72, see figure 1); recording the A/V signal to storage medium (e.g. column 3, lines 52-65, the AV signal is stored in the storage device 40, see figure 1).

However, Corey et al fail to teach using feature information included in at least one of system information and additional information of the received A/V signal. Hiroahi

et al teach using feature information included in at least one of system information and additional information of the received A/V signal (e.g. abstract, paragraphs 11-14 and 117-120 and figures 7-8, the examiner considers the Genre and channel information corresponding to the claimed system information and addition information of the received A/V signal). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the feature information of Hiroahi et al into the teaching of Corey et al to determine category item for the A/V signal to provide detains information of the video data stored in the storage medium to the user to allow user to easily recognize the genres of the program at a glance (e.g. Hiroahi et al, paragraph 11).

For claim 11, Corey et al teach an apparatus for recording an audio/video(A/V) signal, comprising: a first storage medium storing one or more A/V signals (e.g. column 3, lines 52-65, the AV signal is stored in the storage device 40, see figure 1); a controller for determining and storing a category item for the input A/V signal (e.g. column 10, lines 5-17, video program are categorized into categories such as movies, sports, entertainment…etc under “retrieval by title”, column 4, lines 27-38, the control module 60 corresponds to the claimed controller); a second storage medium storing search information including the category item for the A/V signal (e.g. column 10, lines 5-17, the title indexing area for “retrieval by title" is stored in the closed caption storage 72, see figure 1);

However, Corey et al fail to teach de-multiplexing one or the input A/V signal, extracting feature information in which a category of the input A/V signal is seized; using

feature information included in at least one of system information and additional information of the received A/V signal. Hiroahi et al teach demultiplexing one or the input A/V signal, extracting feature information in which a category of the input A/V signal is seized (e.g. paragraph 12, de-multiplex the present_following EIT in which the genres of the broadcast program is contained; using feature information included in at least one of system information and additional information of the received A/V signal (e.g. abstract, paragraphs 11-14 and 117-120 and figures 7-8, the examiner considers the Genre and channel information corresponding to the claimed system information and addition information of the received A/V signal). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the feature information of Hiroahi et al into the teaching of Corey et al to determine category item for the A/V signal to provide detains information of the video data stored in the storage medium to the user to allow user to easily recognize the genres of the program at a glance (e.g. Hiroahi et al, paragraph 11).

Claims 45 and 47 are rejected for the same reason as set forth in claim 11 above.

Claim 19 is rejected for the same reason as set forth in claim 1 above.

For claim 36, Corey et al teach a method of searching a storage medium, which stores one or more audio/video(A/V) signal, for one of the A/V signals, the method comprising: reading the selected A/V signal from the storage medium and displaying the selected A/V signal (e.g. column 4, lines 39-48, and column 10, lines 5-28, video data from the storage 40 can be searched by categories such as movies, sports,

entertainment…etc and the desired video segment or title can be retrieved from the storage 40 and displayed on the monitor).

However, Corey et al fail to specify displaying, when a search for the A/V signal is requested, a category list of the one or more A/V signal; displaying, when a category item to be searched for is selected from the displayed category list, a list of the A/V signal falling under the category item; and wherein the category item for the A/V signal is determined using feature information included in at least one of system information and addition information of the A/V signal.

Hiroahi et al teaches displaying, when a search for the A/V signal is requested, a category list of the one or more A/V signal (e.g. fig 6, paragraph 117-118, menu 601 is considered to be the claimed category list); displaying, when a category item to be searched for is selected from the displayed category list, a list of the A/V signal falling under the category item (e.g. figure 7, paragraph 117-118, the genre search screen 701 is considered to be the claimed “a list of A/V signal falling under the category item”); and wherein the category item for the A/V signal is determined using feature information included in at least one of system information and addition information of the A/V signal(e.g. paragraph 119-120, “program information of the detected channels in relation to the genre” contains the program information and the channels information, which are considered to be the claimed "system information and addition information", respectively). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the feature information of Hiroahi et al into the teaching of Corey et al to determine category item for the A/V signal to provide detains

information of the video data stored in the storage medium to the user to allow user to easily recognize the genres of the program at a glance (e.g. Hiroahi et al, paragraph 11).

Claims 37 and 38 are rejected for the same reasons as set forth in claim 36 above.

For claim 40, Corey et al teach an apparatus for searching a first storage medium, which stores one or more audio/video(A/V)signals, for one or the A/V signals, the apparatus comprising: an information input unit inputting information pertaining to a request of searching for the a/V signal stored in the first storage medium (e.g. column 4, lines 39-48, and column 10, lines 5-28, video data from the storage 40 can be searched by categories such as movies, sports, entertainment…etc and the desired video segment or title can be retrieved from the storage 40 and displayed on the monitor, storage 40 corresponds to the claimed first storage medium); a second storage medium storing search information including a category of the one or more A/V signals stored in the first storage medium, when the A/V signal falling under a particular category item is selected from the category list through the information input unit, reading the selected A/V signal from the first storage medium (e.g. column 4, lines 39-48, and column 10, lines 5-28, video data from the storage 40 can be searched by categories such as movies, sports, entertainment…etc and the desired video segment or title can be retrieved from the storage 40 and displayed on the monitor, the closed caption storage 72 corresponds to the claimed second storage medium).

Corey et al fail to teach display unit displaying the category list; and a controller readying the category list from the second storage medium and controlling the category list to be displayed on the display unit when the search request information is received from the information input unit; Hiroahi et al teach display unit displaying the category list; and a controller readying the category list from the second storage medium and controlling the category list to be displayed on the display unit when the search request information is received from the information input unit (e.g. paragraph 117-118 and figures 6-8, genre information database 501). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the feature information of Hiroahi et al into the teaching of Corey et al to determine category item for the A/V signal to provide detains information of the video data stored in the storage medium to the user to allow user to easily recognize the genres of the program at a glance (e.g. Hiroahi et al, paragraph 11).

Claims 42-43 are rejected for the same reasons as set forth in claim 36 above.

For claims 2 and 20, Corey et al disclose the category or search information (close caption data) is stored in a memory (closed caption storage 72, see claim 11 above) provided separately from the storage medium (Video/Audio storage 40, see claim 11 above).

For claims 3 and 21, Corey et al specify the category search information is stored in the storage medium together with the A/V signal (column 4, line 36-38).

For claims 4 and 22, Corey et al disclose selecting of the category item for A/V signal, comprises:

- Extracting feature information from the AN signal is seized (e.g. abstract, column 4, lines 1-4);
- Comparing the feature information with a predetermined category list (e.g. column 10, lines 5-18, predetermined category items: movies, sorts, entertainment, national news, and local news); and
- Selecting the category item for the A/V signal based on a result of the comparison (e.g. column 10, lines 5-18 Corey et al teach a system and method of searching and retrieval video program base on the closed caption text data. **Figures 6-7, column 5, lines 45-57, and column 10, lines 5-28** of Corey et al teach the video information is categorized into categories such as movies, sports, entertainment, national news and local news by using "a descriptor" contained in the closed caption text data. The examiner considers the “descriptor” corresponds to the “feature information” of the claimed invention, and the categories of “movies, sports, entertainment, national news…etc" correspond to the "predetermined category items" of the claimed invention. However, Corey et al fail to specify **"comparing"** the "descriptor" with the "movies, sports, entertainment, national news...etc". Another feature of Corey et al, teach the function of **“comparing”**. The categories of “movies, sports, entertainment, national news…etc" of the video functions as index for the user to search and retrieve

the desired video easily, See c**olumn 2, lines 5-29**, by comparing the user input text (query) with the index (categories). It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the teaching of Corey et al to "compare" the "descriptor" (feature information) with the categories of “movies, sports, entertainment, national news…etc” (predetermined category items) to classify the video program for the purpose of searching and retrieving the video program efficiently. The success of modifying the teaching of Corey et al would have been expected because both the “descriptor” and the categories of “movies, sports, entertainment, national news...etc" are text and Corey et al have explicitly taught comparing the text query and the text index as discussed above. See MPEP 2141, rational G “some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teaching to arrive at the claimed invention. **KSR, 550 U.S. at__, 82 USPQ2d at 1396**).

For claim 16, Corey et al disclose the additional information is used when the input A/V signal is an analog signal (column 3, line 53-55, signal coming in is digitized. Therefore, the A/V signal must be analog signal).

For claim 17, Corey et al disclose the additional information received together with the input signal, is received through the same channel or a different channel than the input A/V signal (Figure 1, baseband video 32, 48, column 3, lines 2-54, column 5, lines 1-4).

2. Claims 35,39,41,46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al (US 5,703,655) and Hiroahi et al (EP 1063797 A2) as applied to claims 1-4, 11, 16-17, 19-22, 36-38, 40, 42-43,45, 47 above, and further in view of Chen (US 2002/0,136,538 A1).

For claims 35, 39, 41, 46 and 48, Corey et al and Hiroachi et al fail to teach determining a compression ratio for the A/V signal according to the category item selected for the A/V signal. Chen teaches determining a compression ratio for the A/V signal and the category item selected for the A/V signal (e.g. figure 2, paragraph [0015]) It would have been obvious to one ordinary skill in the art at the time the invention was made to compress the A/V signal at a compression ratio according to the category item selected for the A/V signal to efficiently utilize the limited storage space (Chen, paragraph [0007]).

3. Claims 6, 7, 24 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al (US. 5,703,655) and Hiroahi et al (EP 1063797 A2) as applied to claims 1-4, 11, 16-17, 19-22, 36-38, 40, 42-43, 45, 47 above, further in view of Jain et al (U.S. 6,360,234).

See the teaching of Corey et al and Hiroahi above.

For Claims 6, 7, 24 and 25, Corey et al disclose the A/V signal can be categorized into different categories (column 10, lines 5-18). However, Corey et al and Hiroahi fail to disclose any user interaction for adding and categorizing the A/V signal. Jain et al teach the user interaction for adding and categorizing the A/V signal (e.g. abstract, column 6, line 48-67). It would be beneficial for user to define and add category for the A/V signal, so user would have known the category of the A/V signal well. Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to modify teaching of Corey et al and Hiroahi with the teaching of Jain et al to assist user quickly and efficiently retrieve the video in the storage medium.

4. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al (US 5,703,655) and Hiroahi et al (EP 1063797 A2) as applied to claims 1-4, 11, 16-17, 19-22, 36-38, 40, 42-43, 45, 47 above, and further in view of Thomas et al (US 6,847,395 B2).

See the teaching of Corey et al and Hiroahi et al above

For claims 14 and 15, Corey et al and Hiroahi fail to disclose the System information for digital broadcast. Thomas et al disclose system information (SI), wherein the SI is used when the A/V signal is a digital signal (e.g. abstract), and the SI comprises extended text table information, extended channel name descriptor information, and network text table information provided from a Program and System

Information Protocol (PSIP) or Out-Of-Band System Information (OOBSI) (e.g. column 6, lines 57-67, column 7, lines 1-6, network Information Table, Extended Text Table, and column 17, line 22-39, Virtual Channel Table). It would have been obvious for one ordinary skill in the art at the time the invention was made to use the system information disclosed by Thomas et al in the system disclosed by Corey et al and Hiroahi et al for the same reasons disclosed by Thomas et al, which are allowing users to quickly navigate through the data (Thomas et al, column 6, lines 63-66), giving a good deal of descriptive information about the transport stream, and giving the start time, duration, title, content advisory rating about the A/V signal (Thomas et al, column 17, line 26).

5. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corey et al (US 5,703,655), Hiroahi et al (EP 1063797 A2) and further in view of Official Notice.

For claim 49, Corey et al teach an apparatus for recording an audio/video(A/V) signal, comprising: a first storage medium storing one or more A/V signals (e.g. column 3, lines 52-65, the AV signal is stored in the storage device 40, see figure 1); a controller for determining and storing a category item for the input A/V signal (e.g. column 10, lines 5-17, video program are categorized into categories such as movies, sports, entertainment…etc under “retrieval by title”, column 4, lines 27-38, the control module 60 corresponds to the claimed controller); a second storage medium storing search information including the category item for the A/V signal (e.g. column 10, lines 5-17, the title indexing area for “retrieval by title" is stored in the closed caption storage 72, see figure 1);

However, Corey et al fail to teach de-multiplexing one or the input A/V signal, extracting feature information in which a category of the input A/V signal is seized; using feature information included in at least one of system information and additional information of the received A/V signal. Hiroahi et al teach demultiplexing one or the input A/V signal, extracting feature information in which a category of the input A/V signal is seized (e.g. paragraph 12, de-multiplex the present_following EIT in which the genres of the broadcast program is contained; using feature information included in at least one of system information and additional information of the received A/V signal (e.g. abstract, paragraphs 11-14 and 117-120 and figures 7-8, the examiner considers the Genre and channel information corresponding to the claimed system information and addition information of the received A/V signal). It would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the feature information of Hiroahi et al into the teaching of Corey et al to determine category item for the A/V signal to provide detains information of the video data stored in the storage medium to the user to allow user to easily recognize the genres of the program at a glance (e.g. Hiroahi et al, paragraph 11).

Corey et al and Hiroahi et al fail to teach the system information comprises extended text table information, extended channel name descriptor information, and network text tale information. The examiner takes Official Notice for em information comprises extended text table information, extended channel name descriptor information, and network text tale information since these features are well known in the art. It would have been obvious to one ordinary skill in the art at the time the invention

was made to incorporate the extended text table information, extended channel name descriptor information, and network text tale information into the teaching of Corey et al and Hiroahi et al to determine category item for the A/V signal to provide detains information of the video data stored in the storage medium to the user to allow user to easily recognize the genres of the program at a glance.

There's no new ground(s) of rejections. Accordingly, THIS ACTION IS MADE FINAL. See MPEG § 706.07 (a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136 (a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing data of this action. In the event a first reply is filed within TWO MONTHS of the mailing data of this action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period. Then the shortened statutory period will expire on the data the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing data of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the data of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daquan Zhao whose telephone number is (571) 270-1119. The examiner can normally be reached on M-Fri. 7:30 -5, alt Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai Q, can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daquan Zhao/
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621